Interpretive Bulletin on the Application of the Wildfire Regulation for the Forest Industry

Purpose and Scope:

This bulletin is intended to provide guidance to forest industry staff as to the intended application of certain provisions of the Wildfire Regulation. This guidance is not intended to provide legal advice as to the application of legislation.

Background

Two of the cornerstones of the *Wildfire Act* and the Wildfire Regulation are for it to be results-based and to incorporate the concept of professional reliance.

The drafting of the Wildfire Regulation focused on being results-based, rather than the prescriptive provisions under the former *Forest Practices Code of British Columbia Act* (the FPC) and regulations. However, this may result in vagaries of application and interpretation. The FPC provisions were generally based on objective tests (E.G. specific numbers of fire tools) which has been changed under the Wildfire Regulation to a subjective test (E.G. sufficient fire fighting tools). It is intended that this bulletin will bring clarity to some of these issues.

Generally, in a results-based environment, meeting requirements of the regulation such as provisions for fire suppression systems, sufficient fire tools and fire break requirements are examined in detail during an inspection or a fire investigation.

The challenge comes for those 'persons' who are responsible for complying with the results-based provisions in the regulation, for example, in determining when they have 'sufficient water delivery system' 'to effectively fight a fire of reasonably foreseeable size" before any event happens. A person carrying out an industrial activity may well rely on past practices or on the advice of an expert to assist them in determining whether they have 'sufficient fire fighting tools' and "water delivery system' in a particular situation/condition.

1. For all industrial activities; how to determine if tools are adequate?

Under section 5 of the Wildfire Regulation, "sufficient fire tools" are required "at all times while there is a risk of a fire starting and spreading" for a person who carries out an industrial activity.

Definition:

"**sufficient fire fighting tools**" – means "hand tools in a combination and type and of an appropriate number to properly equip all persons taking fire control action, including but not limited to shovels, axes, pulaskis, hand tank pumps, and fire extinguishers" (Reference: Wildfire Regulation section 1.)

One procedure for assessing the adequacy of fire fighting tools could be to start by counting the number of workers on site, and the number of hand tools and water delivery systems which are on site. Each worker should have access to a tool with which to carry out fire suppression work. One can expect that a person working at the end of nozzle would not require a hand tool, whereas a person building hand guard would be expected to have a hand tool, such as a shovel, mattock or Pulaski, suitable for the type of conditions in which the fire has occurred or could be reasonably expected on the industrial operation. Other tools such as a McLeod Tool, hazel hoes or other effective fire fighting tools can be used instead of a mattock or pulaski, with the intent being to use the tool that is most appropriate for the type of fire suppression expected.

It is intended that the number of tools required would be dictated by the number of workers working on site. It is **not** intended that each site must have adequate tools to equip each and every person who may subsequently come on site to undertake fire control actions, since additional resources should come with their own tools.

With the new Wildfire Regulation requirement for fire tools, one of the first considerations for an assessment is to set your mind to two things "At all times while there is a risk of a 1. fire starting and 2. spreading …"; remember both conditions must be met. If there is no risk of a fire starting, for example, snow remains on the block during the time the industrial activity is carried out, there would be no need to have fire tools on-site. The moment there is a reasonable risk of a fire starting and spreading then there is a requirement for tools on-site.

2. For high risk activities; how to determine if the fire suppression system is adequate?

The "fire suppression system" obligations do not apply to all industrial activities. The obligation applies to "high risk activities' as defined in the Wildfire Regulation and are a subset of "industrial activities". In addition to the "sufficient fire tool" requirements, high risk activities carry additional obligations under section 6. One of these requirements is for an "adequate fire suppression system".

Definition:

"**Fire suppression system**" – means a system that is used for the purpose of suppressing a fire and is appropriate for the type of fire, including

(a) a water delivery system,

(b) a suppressant or surfactant delivery system or,

(c) a fire extinguisher

(Reference: Wildfire Regulation section 1.)

As mentioned above, the focus is on results, not process. This definition allows for a choice of fire suppression systems that was not previously allowed. It also ensures that the suppression system is appropriate for the situation. Note that the (a), (b) and (c) components on the list are an "or" list - the requirement could be satisfied by any one or by a combination of the items on the list.

It is not expected that a person would have to maintain a fire suppression system to address every eventuality; rather, it is expected that the system would be adequate to address a fire starting from the activity being carried out giving due consideration to the fire environment at hand (weather, fuels, topography).

The precursor to all of the discussion is that the requirements apply when there is "a risk of a fire starting and spreading". A reasonable risk of a fire starting and spreading should be applied based upon available information, for example using the Canadian Forest Fire Danger Rating System (CFFDRS), probability of ignition models or established local fire history for that industrial activity.

To add clarity as to what a "fire suppression system" could be composed of, each of the three potential component parts ((a), (b), or (c)) of the system are outlined below;

(a) "a water delivery system"
– means a system that can
(I) deliver a sufficient volume of water to effectively fight a fire of reasonably foreseeable size, taking all factors into consideration, including the conditions of any area where the water delivery system may need to be used, and

(II) deliver water to any place
(i) at the site of an industrial activity,
(ii) on the burn area or site of the high risk activity, or
(iii) reasonably adjacent to the burn area or the site of a high risk activity.
(Reference: Wildfire Regulation section 1.)

The intent of this definition is to move away from a "prescriptive" regime where the adequate water delivery system was one centred on a proprietary brand of pump; to a results-based regime where a person's water delivery system is able to suppress a fire that starts as a result of the activity giving due consideration to the fire environment (weather, fuels, topography).

When assessing whether a water delivery system is adequate, look for results rather than process. For example, if a gravity-feed system or a helicopter bucket will provide enough water to effectively extinguish any fire expected on the entire site of operation, then the system would be adequate. In some situations, a backpack water tank may be adequate for any fire expected. An adequate water delivery system could also mean the pump system that was historically prescribed in the previous FPC regulation. The change under the *Wildfire Act* from the previous prescriptive FPC regime is that those carrying out

industrial activities can tailor the water delivery system to suit the expected fire environment for their site.

(b) "a suppressant or surfactant delivery system"

A suppressant or surfactant delivery system is a system that delivers water containing a fire retardant or a foaming agent.

(c) "a fire extinguisher"

A good indication of a necessary precaution would be an integral fire extinguisher system on an engine, or a hand held extinguisher of an appropriate size and type that would be adequate to extinguish an engine or equipment fire.

3. How would a person carrying out high risk activities, obtain representative weather data to determine the Fire Danger Class?

Under section 6 of the Wildfire Regulation, those conducting high risk activities are required to use representative weather data for the area to determine the Fire Danger Class for their location. It is up to the person carrying out the high risk activity to determine what the representative weather station is for the area. The source of this data could be internal weather stations, from the Ministry of Forests, or from other third parties.

The Ministry of Forests' public website (http://www.for.gov.bc.ca/protect/) will continue to display current and forecasted Fire Danger Class for every Ministry weather station. This information is found under the heading of "Detailed Danger Class Report". Accurate locations and elevations of stations are to be found under the "General Weather & Lightning Information". More detailed information on fire weather codes and indices of the Canadian Forest Fire Danger Rating System, along with other weather information and fire weather forecast details are available thru subscription to services. Important reference material for this has been written by Turner and Lawson (1978)[1]. Fire weather information may be applicable to or adapted to the location of the high risk activity and persons using this data would have to adapt it to their specific location.

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[1] Turner, J.A.; Lawson, B.D. 1978. Weather in the Canadian Forest Fire Danger Rating System. A user guide to national standards and practices. Environment Canada, Pacific Forest Research Centre, Victoria, BC. BC-X-177.

4. How does one assess whether a fuel break is adequate?

"Fuel Break" – means

(a) a barrier or change in fuel type or condition, or

(b) a strip of land that has been modified or cleared to prevent fire spread

(Reference: Wildfire Regulation section 1.)

First, it is important to remember that a fuel break does not necessarily mean a bladed guard. Anything – natural, engineered or constructed that modifies or removes the fuel so that there is no reasonable chance of a fire spreading would be acceptable. For example, snow, water, natural bare rock or high fuel moisture could be an adequate fuel break. A fuel break may also be created using a sprinkler system that increases the moisture content of fuel above its ignition point, or it could be that the complete removal of all fuel to mineral soil would also constitute an adequate fuel break. When constructing a fuel break, due consideration should be given to the fire environment at hand (weather, fuels, topography).

It is also important to remember that in a results-based regime, we would not commonly assess the sufficiency of a fuel break until after fire escapes beyond the fuel break, as part of an incident inspection or investigation. It is also understood that there are conditions under which a fuel break could not completely prevent a fire from spreading. The fact that a fire escapes does not automatically infer non-compliance with fuel break requirements.

The requirements for a fuel break under section 7 of the regulation for 'wood processing' or "wood sorting" are intended to capture processing that is done on sites such as a dry land sort or mill yard. Section 7 does not apply to log processing or sorting activities that are conducted as part of harvesting activities on a cut block. Also note that the requirement under section 8(f) for a fuel break for an engine over 7.5kw that is "stationary or semi-permanent" does not apply to log processing activities that are conducted as part of harvesting activities on a cut block where the equipment could be considered 'stationary'.

There are situations where it is obvious that the existing fuel break or the lack thereof would not be sufficient to prevent a fire from spreading beyond the area given reasonably expected fire conditions.

5. Log Forwarding

"Log forwarding" is included as a high risk activity, and should be interpreted as the use of a self-propelled machine, usually self-loading, designed to transport trees or parts of trees on a cut block. The definition of log forwarding in the regulation specifically excludes a logging truck on a road. Therefore, a self-loading logging truck on a road or landing would not be considered log forwarding. If however, the self-loading logging truck drives off the road out onto a setting, it could be included as log forwarding. Note

that "skidding logs" is not included in "log forwarding", but is included as a separate part in the definition of high risk activity.

6. Machinery with tracks, chains or studs

Using machinery with tracks, chains or studs is considered a high risk activity except for those situations specifically excluded in paragraph (k) of the definition of "high risk activity" in the regulation.
A vehicle with metal tracks, chains or studs is not a high risk activity if it is operating;

- in a stationary capacity,
- for road construction, road maintenance or road deactivation, or
- loading logs on a road or a landing or a log sort area.

For example, in many roadside harvesting systems, a tracked loader is used in a "stationary capacity" sitting on the side of the road to load log trucks on the adjacent road. The loader could be sitting over the roadside ditch, on debris, slash or undisturbed forest floor material adjacent to the road. Between loading trucks, the loader may move from log deck to log deck. The activity of this tracked loader would not be considered a high risk activity. Any minor repositioning movements of the loader would not be considered significant enough to reclassify the entire activity as high risk. Under the former FPC FFPS regulation, log loading was not considered a high risk activity (A or B).

Where a person decides to operate a tracked machine loading logs off the road in slash, there is an obligation for the person to be duly diligent regarding s.6 of the *Wildfire Act,* which specifies that the operation must be carried out 'in a time and in a manner' to reasonably prevent fires from starting. Where a person chooses to operate in high to extreme Fire Danger, the person's test of due diligence would be much higher than carrying out the same activity in a lower Fire Danger Class, even though there are no restrictions on that activity.

7. Requirement to Make Resources Available

For the purpose of section 13 of the regulation, it is important to note that the person is only required to make resources (manpower, fire fighting tools and heavy equipment) available if the resources are within 30 km by road. Section 13 of the Wildfire Regulation specifically excludes employees, contactors or agents working at a non-portable timber processing facility (pulp or saw mill) from this requirement.

The intention of this provision is not to impact stationary processing facilities (mining operations or otherwise). Barge camps, the barge and its employees are not resources that the person must make available for fire control activity. If these facilities, other employees or equipment are required, there are specific sections of the *Wildfire Act* (s.16)

under which an official may issue a requisition order that requires a person to supply any facilities, equipment or employee for fire control.

8. Fire Hazard Assessment

Section 11 of the Wildfire Regulation was amended on April 15, 2005 to bring clarity to which type of industrial or prescribed activity must carry out a fire hazard assessment. The industrial activity or prescribed activity (waste disposal site, dry land sort, or camp) must create or increase a fire hazard or is likely to do so. It should be noted that activities such as road maintenance (grading a gravel road), grazing, planting, surveys, block layout, and conducting inspections will not be required to carryout a fire hazard assessment, even though the activity itself is defined as an industrial activity, because the activity does not create or increase the fire hazard.

At this point in time, the content of a Fire Hazard Assessment under the *Wildfire Act* could be the same as that used previously under the former Forest Fire Prevention and Suppression Regulation (s.31), using the form contained in Schedule 7 of that regulation.

Protection Branch will be developing further operational guidance and operational procedures dealing with fire hazard assessment (including the assessment of 'fuel hazard' and its associated risk of a fire starting or spreading) and abatement by fall 2005.

9. Documentation

A clear description of the Fire Suppression System, Water Delivery System, the number of tools and number of people, the types of machinery on site, fuel breaks, site conditions, Fire Danger Class, etc should be recorded. This would assist the person conducting the industrial activity in demonstrating to Ministry of Forests staff how they conform to the requirements of the *Wildfire Act*.

Peter Fuglem
Director, Forest Protection Program
British Columbia Forest Service

MINISTRY OF FORESTS, PROTECTION BRANCH
WILDFIRE REGULATION SECTION 25

FIRE WATCHER EXEMPTION

Pursuant to section 25(1)(a) of the *Wildfire Regulation*, all persons operating under a Community forest agreement, Forest licence, Timber licence, Timber sale licence, Tree farm licence or Woodlot licence conducting high risk activities in the Province of British Columbia, are hereby exempt from the requirements to maintain a fire watcher after work for a minimum of 2 hours as per the *Wildfire Regulation* section 6(2)(a) and Schedule 3.

This exemption is granted subject to the following conditions:

(1) If relying on this exemption, given a Danger Class IV or V the person must:

(a) maintain a fire watcher after work in the circumstances specified in Schedule 3 of the *Wildfire Regulation* for a minimum of 1 hour, if the recorded wind speed averaged over a 10 minute period during the watch is less than 20 km/hr (a) and

(b) maintain a fire watcher after work in the circumstances specified in Schedule 3 of the *Wildfire Regulation* for a minimum of 2 hours, if the recorded wind speed averaged over a 10 minute period is 20 km/hr or greater during the 1 hour period specified in (a).

(2) This exemption is effective July 1, 2005 and shall expire March 31, 2006.

Signed: _____ Date: June 29, 2005

Jodi Beck
Manager, Fire Management
[Official]

BRITISH COLUMBIA

June 30, 2005

All Forest Industry Licensees

Dear Sirs:

Re: Improvements to Wildfire Regulations

This letter serves to update the forest industry sector on recent developments to policy related to the *Wildfire Act Regulations* including amendments to the Regulation and the development of industry guidelines. Requirements for those seeking exemptions are also clarified and the request for exemption to the requirement for a 2 hour fire watch is discussed.

Regulation Amendments

Minor amendments to the *Wildfire Regulation* were implemented on April 15, 2005 to resolve unintended impacts on forest licensees and simplify the administration of this legislation without compromising public safety and security. Amendments to the *Wildfire Regulation* clarify that:

- Forest operations such as log hauling, helicopter logging, using metal track vehicles on a gravel road are not high fire risk activities and should not be affected by restrictions under high fire danger.
- Fire hazard assessments need only be conducted if an industrial activity creates or adversely modifies fuel and are not required for activities such as road grading or tree planting.
- Forest industry resources within 30 km of a fire by road are required to respond in the event of a fire and this does not include office or mill workers.
- Heavy equipment is required by a person who lights a Category 3 rather than a Category 2 open fire.
- An exemption may be granted for an area or an activity.

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The *Wildfire Regulation* consolidated to include these amendments can be found at (http://www.for.gov.bc.ca/tasb/legsregs/wildfire/wildfirereg/wildfirereg.htm).

Application Bulletin – Forest Industry Guidance

The recently released interpretive bulletin (Interpretive Bulletin – Application of Wildfire Regulation for the Forest Industry is attached) is intended to bring clarity to the intent of the *Wildfire Act and Regulations* on key issues raised by the forest industry.

This bulletin provides general guidance to industry and government staff on how to determine if fire tools, a fire suppression system and a fuel break is adequate. How to obtain representative weather data to determine the Fire Danger Class, how log forwarding and operating machinery with tracks, chains or studs falls into high risk activities. General clarification is also offered regarding requirements to make resources available and fire hazard assessments.

Exemption Process

Exemption provisions are outlined in sections 25 (from Regulation provisions) or 26 (from Act Provisions) of the *Wildfire Regulation*. Section 27 of the Regulation outlines the process respecting exemptions. Exemptions may be granted upon request from sections 5, 6 or 7 of the *Wildfire Act* or Parts 2, 4 or section 13 of the Regulation. A person requesting an exemption should submit in writing their exemption request to their local Fire Centre Manager. The exemption request should specify the provision of the Act or Regulation, the area or activity and the period of time for which they are seeking an exemption.

If a person is seeking an exemption from a regulatory provision, the exemption can only be granted if

(a) the exemption is necessary or desirable because the provision that will be the subject of the exemption is inappropriate, given the circumstances or conditions applicable to an area or to the operations of the person to be exempted, or;
(b) the person exempted can and will use specified alternative means to achieve the objectives of the provisions that will be the subject of the exemption.

Reasonable alternative means to achieve the objectives of the provisions should be detailed by the person seeking the exemption to a regulatory provision. For exemptions granted under 25(1)(b), the exemption will be conditional on the person exempted achieving the objectives of the provision.

If a person is seeking an exemption from section 5, 6 or 7 of the Act, the exemption being sought must be necessary or desirable because the provision that will be the subject of the exemption is inappropriate, given the circumstances or conditions applicable to an area or to the operations of the person to be exempted. The basis for the proposed exemption should be detailed by the person seeking the exemption.

Exemption from 2 Hour Fire Watch

Members of COFI, CFPA, ILMA and the Federation of BC Woodlot Associations have requested that an exemption be granted to all licensees in the forest industry in the Province of British Columbia from the requirements to maintain a fire watcher after work for 2 hours as per the *Wildfire Regulation* section 6(2)(a) and Schedule 3. The request has been seriously considered and an exemption will be approved based on representative wind conditions. This exemption is granted subject to the conditions detailed in the attached exemption document. It

should be noted that representative wind conditions can be measured using the Beaufort Scale, a hand held anemometer or an automatic fire weather station, and more information on wind measurement can be found in the following publications:

Turner, J.A.; Lawson, B.D. 1978. Weather in the Canadian Forest Fire Danger Rating System. A user guide to national standards and practices. Environment Canada, Pacific Forest Research Centre, Victoria, BC. BC-X-177.

Taylor, S.W., R.G. Pike and M.E. Alexander. 1997. Field guide to the Canadian Forest Fire Behavior Prediction (FBP) system. Special Report 11, Fire Management Network, Northern Forestry Centre, Canadian Forest Service, Natural Resources Canada. Edmonton, Alberta. viii + 60 p. Available from UBC Press, Vancouver, B.C.

The elements of the *Wildfire Act and Regulation* as discussed have been developed with input from industry, and we look forward to continued cooperation with the forest industry as we move forward under this new regulatory regime.

We welcome your feedback, please contact Judi Beck (Judi.Beck@gov.bc.ca) (250-387-5782) or your local Fire Center.

Yours truly,

for T.R. (Tim) Sheldan
Assistant Deputy Minister
Operations Division

Enclosure(s): 2

pc: Judi Beck, Manager of Fire Management, Protection Branch